

# 9<sup>th</sup> Edition Stretch Code Modeling Analysis

2550 sq.ft. 3 BR Single Family Home with Electric Heat Pump  
Worcester, MA



## HERS Index (ERI)

Target	55
Example Base	66
Example Stretch	54

## Costs and Benefits to Meet Stretch Code

COSTS		BENEFITS	NET	
BUILDER	Adjustments + HERS Rater Fee		Utility Rebates <sup>1</sup>	
	+\$(2,360)		-\$1,900	
HOMEBUYER	Change to Downpayment <sup>3</sup>	Change to Annual Mortgage Payment <sup>3</sup>	Estimated Energy Cost Savings per Year <sup>2</sup>	Year 1 Cash Flow
	+\$(46)	+\$(36)	-\$704	\$621
				Year 2+ Cash Flow
				\$667

1 – Incentives are determined using the Blended Savings Approach calculator. Savings compared to MA reference home.

BSA Incentive = \$0.35 \* kWh savings + \$35 \* MMBtu savings + \$3000 \* 0.xx percent savings (single family home)

2 – Energy costs are based on 19 cents/kWh, \$0.97/therm, \$2.88 gal propane, \$2.58 gal oil. Savings are compared with Base Code home

3 – 30-year mortgage assumes 10% down payment at 4% APR



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## Breakdown of Construction Costs to Meet Stretch Code

FEATURE	Base Code	Stretch Code	Construction Cost
HERS RATING	66	54	\$500
WINDOWS (U-VALUE/SHGC)	.30/.30	.27/.30	\$500
DHW	0.95 EF Tank Electric	3.24 EF Heat Pump DHW	\$660
HEATING	10 HSPF / 19 SEER Heat Pump	12 HSPF / 19 SEER Heat Pump	\$500
COOLING			
DUCT LEAKAGE TO OUTSIDE	4 CFM25 / 100 CFA	2 CFM25 / 100 CFA	\$200
FOUNDATION	Unconditioned, uninsulated basement	No change required	\$0
FLOOR	R38 fiberglass Grade 1	No change required	\$0
WALLS	R21 fiberglass Grade 1	No change required	\$0
HIGH EFFICACY LIGHTING	100% CFL	No change required	\$0
CEILING – FLAT	R-50 blown in cellulose	No change required	\$0
AIR INFILTRATION	3.0 ACH50	No change required	\$0
TOTAL			\$2,360